REMARKS

Claims 4, 19, 33, 45, and 57-58 have been cancelled. Claims 1, 3, 5-7, 12, 15-16, 20-23, 29-30, 34-36, 41, 44, 46-48, 55, 59-61, and 66-67 have been amended. These amendments were made to clarify the invention and were not made for patentability or to overcome the prior art.

Claim 1 has received an objection for reciting "theresponse." Claim 1 has been amended to recite "the response." Therefore, applicants submit that the objection has been overcome.

Claim 3 has received an objection for reciting "an connector." Claim 3 has been amended to recite "a connector." Therefore, applicants submit that the objection has been overcome.

Claim 15 has received an objection for reciting "sourcelanguage." Claim 15 has been amended to recite "source language." Therefore, applicants submit that the objection has been overcome.

Claims 1-4, 16-19, 30-33, 44-45, and 55-60 have been rejected under 35 U.S.C. 101 for provisional double patenting with claims 1-4, 6-9, 11-14, 16-17, and 19-24 of co-pending Application No. 09/849,377. An amendment will be filed in the co-pending application to overcome this rejection.

Claims 55-67 stand as rejected under 35 U.S.C. 101 based on lack of utility. Applicants submit that claim 55 as amended satisfies the requirements of 35 U.S.C. 101. Given that claims 56 and 59-67 depend from claim 55 as amended, applicants submit that these claims also satisfy the requirements of 35 U.S.C. 101.

Claim 1 stands rejected under 35 U.S.C. 103 based on U.S. Application No. 2003/0191970 to Devine et al. ("Devine") in view of U.S. Patent No. 6,738,975 issued to Yee et al. ("Yee"). Applicants respectfully traverse this rejection and request reconsideration thereof in view of the amendments to claim 1 and the following discussion.

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The claimed invention is a solution to the problem of communicating between inconsistent applications and languages, and especially the problem encountered, for example, in an e-commerce environment of multiple applications, developed by multiple development teams, running on different platforms, with different data types, data structures, commands, and command syntax's. At best, this environment is stitched together with application program interfaces and connectors.

Previous attempts to remedy this situation involved application program interfaces and connectors, which were frequently built on Interface Definition Languages. Interface Definition Languages are declarative, defining application program interfaces, and, in some cases, issues such as error handling. The function of Interface Definition Languages within connectors was to enable collaboration between dissimilar applications without hard coded application program interfaces, while providing some degree of one or more of method invocation with strong type checking, run-time method invocation with run time binding, high level language binding, an interface repository containing real time information of server functions and parameters. A further function of the ideal connector and its interface definition language was to support syntactic level extensions, and semantic level extensions.

However, the above-described functions were not completely provided by the interface definition languages and connectors of the prior art. The claimed invention obviates the problems associated with integrating new applications, for example, e-commerce applications, with legacy applications. This is done by the Common Application Metamodel tool, method, and system of applicants' claimed invention.

This is accomplished through metadata interchange information, method invocation with strong type checking, run-time method invocation, run time binding, and high level language binding, with the interface separated from the implementation, and an interface repository containing real time information of client and server interface parameters.

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These attributes are positively recited in Applicants' claims. Specifically, Applicants affirmatively claim providing this communication between an end user (typically a client) application and the application server by:

(i)   converting the application request from a first source language of the first end user application to a first target language running on the application server, and

(ii)   converting the response to the application request from the language running on the application server to the first language of the first end user application.

The above conversions are accomplished through the use of metamodels of the various actors, and specifically, by:

(i)   invoking connector metamodels of the respective source and target languages;

(ii)   populating these connector metamodels with metamodel data of each of the respective source and target languages; and

(iii)   converting the source language to the target language.

Independent claim 1 has been amended, to characterize the metamodel data as comprising various metamodel elements of the languages, including invocation metamodel metadata, application domain interface metamodel metadata, and type descriptor metamodel metadata.

These elements of amended claim 1, which have been added from canceled claim 4, are neither taught nor suggested by any reading of the references, Devine in view of Yee.

Devine discloses a secure server architecture for web based data management. Devine does not disclose "populating the connector metamodels with metamodel data of each of the respective source and target languages wherein the metamodel data comprises invocation metamodel metadata, application domain interface metamodel metadata, and type descriptor metamodel metadata" as recited in claim 1 as amended.

With respect to the elements of canceled claim 4, which are now recited in amended claim 1, pages 7 and 8 of the Office action state that Yee discloses an agent 210

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and adapter 220 to mediate differences in interface protocols and data structures (Column 16, lines 62-65), a message definition object to identify data and define how the system will construct messages (Column 17, lines 49-54), and mapping definition objects to define how the system will transform system messages extracted from one or more enterprise applications into system messages needed by other enterprise applications (Column 17, lines 55-58 and Column 20, lines 53-59).

However, claim 1 as amended does not recite "an agent and adapter to mediate differences in interface protocols and data structures, a message definition object to identify data and define how the system will construct messages, and mapping definition objects to define how the system will transform system messages."

Claim 1 as amended recites "populating the connector metamodels with metamodel data of each of the respective source and target languages wherein the metamodel data comprises invocation metamodel metadata, application domain interface metamodel metadata, and type descriptor metamodel metadata."

Yee does not disclose "populating the connector metamodels with metamodel data of each of the respective source and target languages wherein the metamodel data comprises invocation metamodel metadata, application domain interface metamodel metadata, and type descriptor metamodel metadata" as recited in claim 1 as amended.

Even if Devine and Yee were combined, the combination would neither teach nor suggest "populating the connector metamodels with metamodel data of each of the respective source and target languages wherein the metamodel data comprises invocation metamodel metadata, application domain interface metamodel metadata, and type descriptor metamodel metadata" as recited in claim 1 as amended.

Therefore, applicants submit that claim 1 as amended is patentable over Devine in view of Yee. Given that claims 2-3 and 5-15 depend from claim 1 as amended, applicants submit that these claims are also patentable over Devine in view of Yee.

Claim 16 as amended recites "said metamodel data comprising invocation metamodel metadata, application domain interface metamodel metadata, and type descriptor metamodel metadata" which is neither disclosed nor suggested by Devine and

Yee, alone or in combination. Therefore, applicants submit that claim 16 as amended is patentable over Devine in view of Yee. Given that claims 17-18 and 20-29 depend from claim 16 as amended, applicants submit that these claims are also patentable over Devine in view of Yee.

Claim 30 as amended recites "wherein the metamodel data comprises invocation metamodel metadata, application domain interface metamodel metadata, and type descriptor metamodel metadata" which is neither disclosed nor suggested by Devine and Yee, alone or in combination. Therefore, applicants submit that claim 30 as amended is patentable over Devine in view of Yee. Given that claims 31-32 and 34-43 depend from claim 30 as amended, applicants submit that these claims are also patentable over Devine in view of Yee.

Claim 44 as amended recites "wherein the metamodel data comprises invocation metamodel metadata, application domain interface metamodel metadata, and type descriptor metamodel metadata" which is neither disclosed nor suggested by Devine and Yee, alone or in combination. Therefore, applicants submit that claim 44 as amended is patentable over Devine in view of Yee. Given that claims 46-54 depend from claim 44 as amended, applicants submit that these claims are also patentable over Devine in view of Yee.

Claim 55 stands rejected under 35 U.S.C. 103 based on Yee in view of U.S. Patent No. 6,094,688 issued to Mellen-Garnett et al. ("Mellen-Garnett").

Yee does not disclose "wherein the metamodel data in the repository comprises invocation metamodel metadata, application domain interface metamodel metadata, and type descriptor metamodel metadata" as recited in claim 55 as amended.

Mellen-Garnett discloses a modular application collaboration including filtering at the source and proxy execution of compensating transactions to conserve server resources. Mellen-Garnett does not disclose "wherein the metamodel data in the repository comprises invocation metamodel metadata, application domain interface

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metamodel metadata, and type descriptor metamodel metadata" as recited in claim 55 as amended.

Even if Yee and Mellen-Garnett were combined, the combination would neither teach nor suggest "wherein the metamodel data in the repository comprises invocation metamodel metadata, application domain interface metamodel metadata, and type descriptor metamodel metadata" as recited in claim 55 as amended.
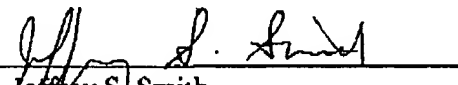
Therefore, applicants submit that claim 55 as amended is patentable over Yee in view of Mellen-Garnett. Given that claims 56 and 59-67 depend from claim 55 as amended, applicants submit that these claims are also patentable over Yee in view of Mellen-Garnett.

In view of the foregoing, Applicants respectfully request that the Examiner reconsider the pending claims in light of the above discussion. The Examiner is urged to call the undersigned at the below-listed telephone number if, in the Examiner's opinion, such a phone conference would expedite or aid in the prosecution of this application.

Respectfully submitted,

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